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Deveau

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(54) **TARGET SIMULATION SYSTEM AND METHOD**

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(56) **References Cited**

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(57) **ABSTRACT**

A controlled simulation of an underwater target for testing and evaluating a sonar system. The target simulation system receives an acoustic test signal and generates a simulated reflected signal emulating the test signal reflected from a target of known target strength. The system includes hydrophones and projectors located underwater and a signal processing system located out of the water. The signal processing system detects the test signal received by the hydrophone and converts the test signal to digital format. A computer modulates or weights the digital signal using a target strength value representing the target strength to produce a digital representation of a simulated reflected signal. This simulated reflected signal is converted to an analog format and is retransmitted as a simulated reflected acoustic signal using the projector. The level of the simulated reflected acoustic signal can be increased or decreased to simulate various sizes of the same target.

16 Claims, 3 Drawing Sheets